26. (Thrice Amended) A wheel assembly according to claim 20, wherein said tire further comprises a circumferential groove therein, said balancing device being engaged in said circumferential groove.

27. (Thrice Amended) A wheel assembly according to claim 20, wherein said rim further comprises an edge thereon and a circumferential groove defined between said tire and said edge of said rim, said balancing device being engaged in said circumferential groove.

28. (Thrice Amended) A wheel assembly according to claim 20, wherein said balancing device is firmly mounted to said tire by gluing.

Remarks

To highlight the distinction of the above referenced invention over the prior art as interpreted by the Examiner in the Office Action of September 5, 2001, Paper No.13, the specification and claims were amended as set forth herein. Claims 2-5, 9, 12-13, 16 and 20-28 were amended to more clearly define the subject matter of the invention and to place all of the claims remaining in the application in condition for allowance. The specification was amended herein to more succinctly highlight the subject matter that Applicants regard as the invention. No new matter was presented and such amendments are deemed unobjectionable. Entry thereof is respectfully requested.

The Examiner objected to the drawings under 37 C.F.R. §1.83(a) for failing to show every feature of the invention specified in the claims. Specifically, the Examiner alleged that the balancing device mounted to the inside of the sidewall of the tire as set forth in Claim 24 was not shown in the drawings. Claim 24 has been amended to indicate that the balancing device is mounted to the inboard sidewall of a tire, not the inside of the

sidewall. Figures 2, 5, 7, and 9 all show the balancing device mounted to both the inboard sidewall and the outboard sidewall of a tire. Applicants submit that the drawings show every feature of the invention specified in the claims as amended. Accordingly, reconsideration and withdrawal of the objection to the drawings under 37 C.F.R. §1.83(a) are respectfully requested.

The Examiner objected to the specification under 37 C.F.R. §1.75(d)(1) for failing to provide proper antecedent basis for the claimed subject matter. Specifically, the Examiner alleged that there was no description of a balancing device being mounted on the inside of the tire sidewall as set forth in Claim 24. Figures 2, 5, 7, and 9 of Applicants' specification indicate to one of ordinary skill in the art that the balancing device is mounted on an inboard sidewall of the tire, not the inside of the sidewall. Page 6, lines 8-9, of the specification has been amended to clarify that the balancing device is mounted on an inboard sidewall of the tire as depicted in figures 2, 5, 7, and 9 of the specification. Furthermore, Claim 24 has also been amended to be consistent with figures 2, 5, 7, and 9 of the specification by indicating that the balancing device is mounted along an inboard sidewall, rather than inside the sidewall. Applicants submit that no new matter has been added, and that page 6, lines 8-9, of the amended specification provides proper antecedent basis for the claimed subject matter. Accordingly, reconsideration and withdrawal of the objection to the specification under 37 C.F.R. §1.75(d)(1) are respectfully requested.

The Examiner objected to Claim 20 for the reason that Applicants' description of "A wheel" in the preamble was inconsistent with a structure that includes a rim, a tire and a balancing device. Claim 20 has been amended to resolve any inconsistencies by changing "A wheel" to "A wheel assembly". Accordingly, reconsideration and withdrawal of the objection to Claim 20 are respectfully requested.

The Examiner rejected Claim 25 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants have amended Claim 25 to further clarify the invention as suggested by the Examiner. Applicants assert that no new matter has been added, that Claim 25 does particularly point out and distinctly claim the subject matter that Applicants regard as the invention, and that the amended claim is now allowable. Accordingly, reconsideration and withdrawal of the rejection of Claim 25 under 35 U.S.C. §112 are respectfully requested.

The Examiner rejected Claims 1, 2, 7, 8, 9, 10, 11, 12, 14, 17, 20, 22, and 23 under 35 U.S.C. §102(b) as being anticipated by Woolson, U.S. Patent 1,692,145, and further rejected Claims 20 and 27 as being anticipated by Thissen et al., EPO 222391. The undersigned attorney respectfully traverses the Examiner's rejections of independent Claims 1 and 20, and dependent Claims 2, 7, 8, 9, 10, 11, 12, 14, 17, 22, 23 and 27 in view of the amendments presented herein and submitted herewith as well as the following argument for the reason that the claims are not anticipated by either Woolson or Thissen et al.

The test for determining if a reference anticipates a claim, for purposes of a rejection under 35 U.S.C. §102, is whether the reference discloses all the elements of the claimed combination, or the mechanical equivalents thereof, functioning in substantially the same way to produce substantially the same results. As noted by the Court of Appeals of the Federal Circuit in *Lindemann Maschinenfabrick GmbH v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984), in evaluating the sufficiency of an anticipation rejection under 35 U.S.C. §102, the Court stated:

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim."

Applicants' independent Claim 1 requires:

"1. A balancing device for a tire mounted to a wheel, said balancing device comprising:

a **case** having at least one surface thereon; and

a **single balancing weight enclosed in said case**,

said at least one surface of said case having means for mounting said case to said tire."

Applicants' independent Claim 20 as amended requires:

"20. A wheel assembly including a rim having an axis, a tire and a balancing device, said balancing device comprising:

a **case** having at least one surface thereon; and

a **single balancing weight enclosed in said case**,

said at least one surface of said case being firmly mounted to a surface of a side of said tire."

Woolson does not disclose a single balancing weight. Rather, Woolson discloses a tire casing having a plurality of integral patch-like members, apertures in said members and weights secured in said apertures. The Examiner's contention that "The articulated links 10 comprise a single weight in the assembled device of the links and the case" (item number 13 of the Office Action mailed on 9/05/01) misses the point that Woolson requires a plurality of the assembled devices. Woolson discloses a plurality of the assembled devices (each including a weight) secured at regular intervals to a tire casing such that the wheel assembly remains balanced regardless of the orientation of the tire casing relative to the rim. The tire assembly disclosed in Woolson cannot remain balanced with one single weight. Woolson requires multiple sites each having an adjustable weight system to ensure that a tire casing will remain balanced. Therefore, Woolson does not meet the limitation of a single weight.

NOT WHAT IS CLAIMED

Furthermore, Woolson does not disclose anything of any kind being enclosed in a case. Firstly, there is no case disclosed in Woolson. Woolson discloses an integral "patch-like member" with "perforations" having the articulated links threaded and distributed therethrough. One of ordinary skill in the art would not confuse an integral patch with a case, nor does the Woolson specification support such a broad interpretation of the term patch. Secondly, the articulated links are not enclosed within the patch-like member. The term "enclosed" is defined as closed in or surrounded. The patch-like member of Woolson cannot possibly close in or surround the weights, because the weight can "have portions added thereto or taken therefrom" as exemplified in Figure 3 wherein articulated links can extend outside of the patch-like member. Therefore, the patch-like member of Woolson must be open such that the articulated links can be exposed, thereby also exposing the inside of the patch-like member.

Finally, Woolson does not disclose means for mounting a case to a tire, nor is a case mounted to a tire. Rather, Woolson provides a tire with a plurality of patch-like members integrally manufactured onto the side of the tire by a process of vulcanization such that the patch-like members have no separate surface of their own that affix to the tire. Woolson does not disclose a means for mounting the integral patch-like members because the members are integrally manufactured onto the tire casing before the tire is assembled to the wheel. The process described in Woolson is possible because the location of the integral patch members is not critical and does not vary from tire to tire. Applicants' disclosure includes a case with a means for mounting so that the case can be attached at a specific, predetermined location on the tire. The appropriate location for the case cannot be determined until the tire is attached to the wheel, and the appropriate location will vary

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from tire to tire. By using a single case with a means for mounting, Applicants structurally differ from Woolson's plurality of patch-like members.

Thissen et al. fail to disclose a case member separately mounted to a side of a tire. The balancing skims in Thissen et al. are fitted in between a tire and a rim flange. They are not mounted to the tire. Applicants' disclosure provides a means for balancing a wheel assembly regardless of wheel and/or rim geometry, while Thissen et al. require a specific rim with a specific flange because the balancing skim is not mounted to the tire.

Based upon the above argument, Applicants respectfully submit that neither the Woolson nor the Thissen et al. references disclose each and every element arranged as in the claim of any of Applicants' independent claims. Therefore, in applying the test for anticipation as set forth in *Lindemann,* neither Woolson nor Thissen et al. anticipate either of Applicants' independent claims. Further, under principles of claim dependency, Woolson and Thissen et al. do not anticipate any of the dependent claims either. Accordingly, reconsideration and withdrawal of the rejection of independent Claims 1 and 20 and dependent Claims 2, 7, 8, 9, 10, 11, 12, 14, 17, 22, 23 and 27 under 35 U.S.C. §102(b) are respectfully requested.

The Examiner rejected dependent Claims 3, 4, 6, 18, 19, 21 and 24 under 35 U.S.C. §103 as being unpatentable over Woolson. The Examiner also rejected dependent Claims 13, 15, 16 and 28 under 35 U.S.C. §103 as being unpatentable over Woolson in view of Turoczi, Jr., U.S. Patent 3,786,850, and further rejected dependent Claim 26 as being unpatentable over Woolson in view of Flebbe, DE 3632981. Applicants' attorney respectfully traverses each of the 35 U.S.C. §103 rejections set forth herein in view of the claims as amended and for the reason that Applicants' invention is not an obvious improvement over the prior art.

With respect to the rejections under 35 U.S.C. §103, it is noted in MPEP Section 706 that the standard of patentability to be followed in the examination of a patent application is that which was enunciated by the Supreme Court in *Graham v. John Deere*, 148 USPQ 459 (1966), where the Court stated:

> "Under Section 103, the scope and the content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved."

Accordingly, to establish a prima facie case of obviousness, the Patent Office must; (1) set forth the differences in the claim over the applied references: (2) set forth the proposed modification of the references which would be necessary to arrive at the claimed subject matter; and (3) explain why the proposed modifications would be obvious. To satisfy step (3) above, the Patent Office must identify where the prior art provides a motivating suggestion, inference or implication to make the modifications proposed in step (2) above. *In re Jones*, 21 USPQ2d 1941 (Fed. Cir. 1992). Prior to discussing the unobviousness of the present invention over the prior art, the teachings of the prior art references and the differences, novelty, and unobviousness of the present invention over the prior art references will be set forth.

Woolson is directed to the problem of wheel assembly imbalance due to inequalities of balance in the tire casing itself resulting in the need to rebalance the tire upon removal and re-assembly of a tire casing to a wheel. To overcome this problem Woolson teaches a way to inherently balance a tire casing so that the wheel assembly may not be thrown out of balance regardless of the orientation of the tire casing relative to the wheel itself.

To accomplish the teachings, Woolson discloses a plurality of patch-like members integrally manufactured to the side of a tire casing before the tire is assembled to

the wheel. The integral patch-like members are evenly spaced around the perimeter of the tire casing. Each patch-like member is provided with perforations through which a plurality of articulated links of weight material are threaded. After the tire is assembled to the rim, the articulated links of weight material are either added to or subtracted from the integral patch-like members to achieve balance. It is important to point out that Woolson specifies a plurality of patch-like members because it is not possible to balance a wheel assembly by arbitrarily adding weight to a single location on a tire casing. Woolson relies on a plurality of evenly spaced patch-like members so that weight can be added to or subtracted from any area of the tire as determined after the tire is assembled to the wheel.

Turoczi, Jr., is directed to the problems associated with maintaining wheel assembly balance by clamping lead weights to a rim. Specifically, Turoczi, Jr. mentions their unseemly appearance and deleterious effects on magnesium-chrome wheels. Accordingly, Turoczi, Jr. teaches using indicia-shaped balance weights to more attractively balance a tire and identify a tire and wheel assembly so as to deter theft.

Turoczi, Jr. accomplishes this objective by providing a balanced wheel having a plurality of balance weights affixed to the sidewalls of a tire. Each balance weight is composed of a solid mass of rubber, is shaped as a letter or a logo, and is affixed to the tire with rubber cement. Reference the Background section of Applicants' application for various problems and disadvantages of the Turoczi, Jr. balance weights. Note that there is absolutely no teaching or suggestion in Turoczi, Jr. of using a balance weight enclosed in a case. Instead, Turoczi, Jr., specifically teaches use of a solid mass of rubber affixed to the sidewall of the tire.

Flebbe is directed to the problem of fitting and moving wheel assembly balancing weights. To overcome this problem Flebbe teaches a way to secure a weight to a

wheel assembly by wedging a fastener between the tire and an edge of the wheel rim. To accomplish the teachings, Flebbe discloses a cover ring between the tire and wheel rim. A holder is fitted on the cover ring to hold a balancing weight. As in Thissen et al., Flebbe requires specific rim geometry to generate the forces necessary to hold the balancing weight in place.

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In contrast, Applicants' invention is directed to the prior art problems of damage to a wheel rim associated with attachment of a balancing weight and implementation of a single balancing weight on rims without peripheral rim flanges. Applicants teach balancing a wheel and tire assembly by attaching a balancing device to the sidewall of the tire.

Applicants' invention discloses a balancing weight enclosed within a case that is fixed to the sidewall of the tire. The case is composed of a material that matches the color of the tire so as to blend together therewith. The balancing weight is preferably composed of lead, but can be composed of almost any material, and a standard balancing weight can also be used. The ideal location and weight required to balance a wheel assembly are established by conventional balancing procedures. Applicants teach constructing the weight enclosed in a case such that the total weight of the combination is equivalent to the ideal weight established through conventional balancing procedures. The wheel assembly is balanced using a single device by attaching the appropriate weight enclosed in a case at the ideal location established through conventional balancing procedures. As Applicants disclose mounting a balancing device to the sidewall of a tire, there is no potential for damage to the rim by the device and the geometry of the rim is irrelevant for purposes of attachment. According to the discussion above with respect to

the prior art references, there are patentably significant differences as set forth below between Applicants' invention and any combination of Woolson, Turoczi, Jr. and Flebbe.

The differences between Applicants' invention and the Woolson reference cited by the Examiner in the rejection under 35 U.S.C. §103 are quite clear. The solution taught by Woolson is directed to problems totally different than that described in Applicants' invention. Woolson addresses the problem of maintaining wheel assembly balance regardless of the tire's orientation relative to the rim. In contrast, Applicants' disclosure is directed to the problems of damage to a wheel rim associated with attachment of a balancing weight and implementation of a single balancing weight on rims without peripheral rim flanges. The Woolson reference does not address the problem of damage to a rim associated with attachment of a balancing weight. Applicants' invention points out a problem and teaches a solution to a problem that was not present, much less recognized, by Woolson.

Furthermore, it is technically impossible for the Woolson disclosure to maintain wheel assembly balance with a single weight. Woolson relies on a plurality of integral patch-like members, each having articulated weights, distributed around the perimeter of a tire casing. The appropriate location for balancing a wheel assembly with a single weight cannot be determined until the entire wheel assembly is balanced with conventional methods. As Woolson attaches the integral patch-like members to the tire casing before the tire is mounted onto the rim, application of a single patch-like member would result in an unbalanced wheel assembly. Applicants' disclosure functionally and structurally replaces the plurality of integral patch-like members with a single case.

NOT WHAT IS CLAIMED

Even if, as the Examiner suggests, the teachings of Woolson and Turoczi, Jr. or Woolson and Flebbe are combined, one skilled in the art would have no basis for making

such a combination. It is respectfully suggested that, but for the disclosure made by the Applicants in the application, there is no suggestion whatsoever to combine the teachings of Woolson and Turoczi, Jr. or Woolson and Flebbe in order to obviate Applicants' invention as taught by the Applicants and recited in the claims presently pending in the application. Moreover, any such combination simply would not result in Applicants' invention

If, as the Examiner suggests, Woolson is combined with Turoczi, Jr. in an attempt to obviate Applicants' invention, the suggested combination would not result in Applicants' invention and would in fact require extensive additional structure in an attempt to acquire similar results. Specifically, neither reference discloses a structure encasing a balancing weight, and neither reference discloses a single structure capable of balancing a wheel assembly. The Examiner rejected dependent Claims 13, 15, 16 and 28 as being unpatentable because Turoczi, Jr. suggests the use of glue as a means to attach the patch-like members of Woolson. However, a combination of references resulting in a plurality of patch-like members glued to the sidewall of a tire still does not suggest a case to hold a balancing weight or a single device to balance a wheel assembly. Woolson discloses a plurality of integral patch-like members through which weights are threaded. The threaded weights are exposed at both ends of the patch-like members and the weights are not encased or enclosed. Turoczi, Jr. teaches affixing a plurality of solid blocks of rubber shaped like letters or logos to a tire. As neither reference suggests a case to hold a balancing weight or a single device to balance a wheel assembly, the combination cannot possibly make such a suggestion to a person skilled in the art.

Finally, the Examiner contends that the tire with a circumferential groove for the reception of a balancing device as described in Claim 26 is unpatentable over

Woolson in view of Flebbe. The groove referred to in Claim 26 is in the tire, whereas the groove described in Flebbe is in the rim between the tire and a rim flange. One of the primary advantages of Applicants' disclosure is a means for implementing a balancing system on a wheel assembly without reliance on a rim flange. The Examiner's combination of Woolson and Flebbe would at best result in a plurality of patch-like members mounted in a groove between the tire and a rim flange. Frankly, the Examiner's combination of prior art references would be incompatible with itself and inoperative in view of the objective set forth in Woolson. Woolson teaches threading linked weights into a plurality of patch-like members as required to maintain wheel assembly balance. The process of threading linked weights into a plurality of patch-like members would become far more cumbersome if the members were embedded into a groove between the tire and a peripheral rim flange.

Therefore, it is respectfully submitted that, but for the disclosure made by the Applicants in the application, there is no teaching, suggestion, or motivation whatsoever to take the teachings of Woolson alone or in combination with the teachings of Turoczi, Jr. or Flebbe to in any way obviate Applicants' invention as taught by the claims presently pending in the application. None of the references teach or suggests a single balance weight enclosed in a case that is mounted to a tire. It is well settled patent law that the mere fact that a disclosure can somehow be combined with other references does not make that combination obvious unless the prior art contains some suggestion of the desirability for combining the prior art references. In other words, to satisfy step (3) of the prima facie case of obviousness above, there must be "some teaching, suggestion, or motivation to combine the references," as recently summarized by *In re Rouffet*, 149 F.3d 1350, 1355-56, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998). Here, the prior art contains

absolutely no suggestion whatsoever for combining the references to teach the invention as claimed according to Applicants' disclosure.

Accordingly, Applicants respectfully assert that the Examiner would have to use improper hindsight reconstruction in an attempt to obviate Applicants' invention after having the benefit of reading Applicants' application. Absent recognition of the problem faced by the Applicants, the prior art cannot possibly suggest, singularly or in combination, a solution as novel as Applicants' invention. One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988).

In view of the foregoing remarks, the undersigned attorney respectfully submits that the pending independent and dependent claims are in proper form, define patentably over the prior art, and are clearly allowable. Applicants' attorney, therefore, respectfully requests that the Examiner's rejection of dependent Claims 3, 4, 6, 13, 15, 16, 18, 19, 21, 24, 26 and 28 under 35 U.S.C. §103 be withdrawn and that a formal Notice of Allowance be issued therefor.

In view of the finality of the above referenced Office Action, every effort has been made to resolve all issues pending in this application. In the event the Examiner is not persuaded of the patentability of the claims as amended herein, he is respectfully requested to enter this amendment for purposes of appeal.

The prior art made of record but not relied on, namely Songer, Brayer and German patents 2541458, 3529513 and 3640198, has been reviewed with interest. It is respectfully submitted that the present invention defines patentably thereover.

In accordance with 37 CFR §1.121, a clean copy of the claims as currently pending in the application, omitting all bracketed text and underlining, is included herewith as Exhibit A.

If the Examiner has any questions with respect to any matter now of record, Applicants' attorney may be reached at (248) 362-1210.

Respectfully submitted,

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Certificate under 37 CFR §1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on December 20, 2001

Date: December 20, 2001

Remy J. VanOphem, Reg. No. 27053